

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Jane P. Bearinger, et al.                      Docket No. : IL-11213  
Serial No. :    Art Unit :  
Filed :    Examiner :  
For : Methods and Apparatus for Puncture Site Closure Comprising  
Polymer Foams

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents  
Alexandria, VA 22313-1450

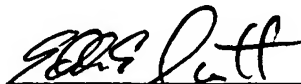
Dear Sir:

Forwarded herewith is an Information Disclosure Statement, Form-1449, in the above-identified application. Copies of the cited references are enclosed: 50 U.S. Patent Documents, 3 Foreign Patent Documents and 16 Other Disclosures.

The above-mentioned disclosures, which are not admitted as prior art, are identified on the enclosed Form 1449.

Respectfully submitted,

Dated: *February 17, 2004*

  
\_\_\_\_\_  
Eddie E. Scott  
Attorney for Applicant  
Registration No. 25,220

Enclosures: As noted above

Please type a plus sign (+) inside this box +

PTO/SB/08A (08-00)

Approved for use through 10/31/2002. OMB 0651-0031  
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, persons are required to respond to a collection of information unless it contains a valid OMB control number.

|  |   |    |   |                          |  |  |
|--|---|----|---|--------------------------|--|--|
| Substitute for form 1449A/PTO<br><b>INFORMATION DISCLOSURE<br/>STATEMENT BY APPLICANT</b><br>(use as many sheets as necessary) |   |    |   | <b>Complete if Known</b> |  |  |
|  |   |    |   | Application Number       |  |  |
|  |   |    |   | Filing Date              |  |  |
|  |   |    |   | First Named Inventor     |  |  |
|  |   |    |   | Group Art Unit           |  |  |
| Examiner Name  |   |    |   |                          |  |  |
| Attorney Docket Number   |   |    |   | IL-11213                 |  |  |
| Sheet  | 1 | of | 5 |                          |  |  |

| U.S. PATENT DOCUMENTS |                       |                             |                                      |   |   |   |
|-----------------------|-----------------------|-----------------------------|--------------------------------------|---|---|---|
| Examiner Initials*    | Cite No. <sup>1</sup> | U.S. Patent Document Number | Kind Code <sup>2</sup><br>(if known) | Name of Patentee or Applicant of Cited Document | Date of Publication of Cited Document<br>MM-DD-YYYY | Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear |
|                       |                       | 3,604,425                   |                                      | Le Roy  | 09-14-1971  |   |
|                       |                       | 3,757,629                   |                                      | Schneider                                       | 09-11-1973  |   |
|                       |                       | 3,805,337                   |                                      | Branstetter                                     | 04-23-1974  |   |
|                       |                       | 4,192,315                   |                                      | Hilzinger, et al.                               | 03-11-1980  |   |
|                       |                       | 4,217,902                   |                                      | March   | 08-19-1980  |   |
|                       |                       | 4,396,139                   |                                      | Hall, et al.                                    | 08-02-1983  |   |
|                       |                       | 4,485,816                   |                                      | Krumme  | 12-04-1984  |   |
|                       |                       | 4,586,503                   |                                      | Kirsch, et al.                                  | 05-06-1986  |   |
|                       |                       | 4,777,950                   |                                      | Kees, Jr.                                       | 10-18-1988  |   |
|                       |                       | 4,860,746                   |                                      | Yoon  | 08-29-1989  |   |
|                       |                       | 4,917,087                   |                                      | Walsh, et al.                                   | 04-17-1990  |   |
|                       |                       | 5,007,921                   |                                      | Brown   | 04-16-1991  |   |
|                       |                       | 5,026,390                   |                                      | Brown   | 06-25-1991  |   |
|                       |                       | 5,049,591                   |                                      | Hayashi, et al.                                 | 09-17-1991  |   |
|                       |                       | 5,053,008                   |                                      | Bajaj   | 10-01-1991  |   |
|                       |                       | 5,061,274                   |                                      | Kensey  | 10-29-1991  |   |
|                       |                       | 5,156,609                   |                                      | Nakao, et al.                                   | 10-20-1992  |   |
|                       |                       | 5,176,648                   |                                      | Holmes, et al.                                  | 01-05-1993  |   |
|                       |                       | 5,192,301                   |                                      | Kamiya, et al.                                  | 03-09-1993  |   |
|                       |                       | 5,192,302                   |                                      | Kensey, et al.                                  | 03-09-1993  |   |
|                       |                       | 5,222,974                   |                                      | Kensey, et al.                                  | 06-29-1993  |   |
|                       |                       | 5,304,184                   |                                      | Hathaway, et al.                                | 04-19-1994  |   |
| Examiner Signature    |                       |                             |                                      | Date Considered                                 |   |   |

Please type a plus sign (+) inside this box +

PTO/SB/08A (08-00)

Approved for use through 10/31/2002. OMB 0651-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, persons are required to respond to a collection of information unless it contains a valid OMB control number.

|  |   |    |   |                          |  |          |
|--|---|----|---|--------------------------|--|----------|
| Substitute for form 1449A/PTO<br><b>INFORMATION DISCLOSURE<br/>STATEMENT BY APPLICANT</b><br>(use as many sheets as necessary) |   |    |   | <b>Complete if Known</b> |  |          |
|  |   |    |   | Application Number       |  |          |
|  |   |    |   | Filing Date              |  |          |
|  |   |    |   | First Named Inventor     |  |          |
|  |   |    |   | Group Art Unit           |  |          |
|  |   |    |   | Examiner Name            |  |          |
| Sheet  | 2 | of | 5 | Attorney Docket Number   |  | IL-11213 |

| U.S. PATENT DOCUMENTS - CONTINUED |                          |   |    |   |  |   |
|-----------------------------------|--------------------------|---|----|---|--|---|
| Examiner<br>Initials*             | Cite<br>No. <sup>1</sup> | U.S. Patent Document<br>Number Kind Code <sup>2</sup><br>(if known) |    | Name of Patentee or<br>Applicant<br>of Cited Document | Date of Publication of<br>Cited Document<br>MM-DD-YYYY | Pages, Columns, Lines,<br>Where Relevant Passages or<br>Relevant Figures Appear |
|                                   |                          | 5,366,458   |    | Korthoff, et al.                                      | 11-22-1994   |   |
|                                   |                          | 5,478,354   |    | Tovey, et al.   | 12-26-1995   |   |
|                                   |                          | 5,527,322   |    | Klein, et al.   | 06-18-1996   |   |
|                                   |                          | 5,674,231   |    | Green, et al.   | 10-07-1997   |   |
|                                   |                          | 5,683,405   |    | Yacoubian, et al.                                     | 11-04-1997   |   |
|                                   |                          | 5,695,505   |    | Yoon  | 12-09-1997   |   |
|                                   |                          | 5,782,844   |    | Yoon, et al.  | 07-21-1998   |   |
|                                   |                          | 5,782,861   |    | Cragg, et al.   | 07-21-1998   |   |
|                                   |                          | 5,810,846   |    | Virnich, et al.                                       | 09-22-1998   |   |
|                                   |                          | 5,810,851   |    | Yoon  | 09-22-1998   |   |
|                                   |                          | 5,830,125   |    | Schribner, et al.                                     | 11-03-1998   |   |
|                                   |                          | 5,910,155   |    | Ratcliff, et al.                                      | 06-08-1999   |   |
|                                   |                          | 5,910,357   |    | Hachisuka, et al.                                     | 06-08-1999   |   |
|                                   |                          | 5,964,744   |    | Balbierz, et al.                                      | 10-12-1999   |   |
|                                   |                          | 6,059,815   |    | Lee, et al.   | 05-09-2000   |   |
|                                   |                          | 6,086,599   |    | Lee, et al.   | 07-11-2000   |   |
|                                   |                          | 6,090,072   |    | Kratoska, et al.                                      | 07-18-2000   |   |
|                                   |                          | 6,102,917   |    | Maitland, et al.                                      | 08-15-2000   |   |
|                                   |                          | 6,102,933   |    | Lee, et al.   | 08-15-2000   |   |
|                                   |                          | 6,120,515   |    | Rogers, et al.  | 09-19-2000   |   |
|                                   |                          | 6,160,084   |    | Langer, et al.  | 12-12-2000   |   |
|                                   |                          | 6,174,322   | B1 | Schneidt  | 01-16-2001   |   |
|                                   |                          | 6,388,043   | B1 | Langer, et al.  | 05-14-2002   |   |
| Examiner<br>Signature             |                          |   |    |   | Date<br>Considered                                     |   |

Please type a plus sign (+) inside this box +

PTO/SB/08B (08-00)

Approved for use through 10/31/2002. OMB 0651-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO

# **INFORMATION DISCLOSURE STATEMENT BY APPLICANT**

(use as many sheets as necessary)

## **Complete if Known**

|                        |                           |
|------------------------|---------------------------|
| Application Number     |                           |
| Filing Date            |                           |
| First Named Inventor   | Jane P. Bearinger, et al. |
| Group Art Unit         |                           |
| Examiner Name          |                           |
| Attorney Docket Number | IL-11213                  |

Sheet 3 of 5

## **U.S. PATENT DOCUMENTS - CONTINUED**

|  |  |              |    |                       |            |  |
|--|--|--------------|----|-----------------------|------------|--|
|  |  | 6,391,048    | B1 | Ginn, et al.          | 05-21-2002 |  |
|  |  | 6,471,715    | B1 | Weiss                 | 10-29-2002 |  |
|  |  | 2003/0009180 | A1 | Hinchliffe, et al.    | 01-09-2003 |  |
|  |  | 2002/0133193 | A1 | Ginn, et al.          | 09-19-2002 |  |
|  |  | 2003/0144695 | A1 | McGuckin, Jr., et al. | 07-31-2003 |  |

## **FOREIGN PATENT DOCUMENTS**

| Examiner Initials* | Cite No. <sup>1</sup> | Foreign Patent Document<br>Office <sup>3</sup> Number <sup>4</sup> Kind Code <sup>5</sup><br>(if known) | Name of Patentee or<br>Applicant<br>of Cited Document | Date of Publication of<br>Cited Document<br>MM-DD-YYYY | Pages, Columns, Lines, Where<br>Relevant Passages or<br>Relevant Figures Appear | T <sup>6</sup> |
|--------------------|-----------------------|---|---|--|---|----------------|
|                    | 0 337 918 B1          | EP  | Monfort, et al.                                       | 09-11-1994   |   |                |
|                    | WO 97/20505           |   | Zhu, et al.   | 06-12-1997   |   |                |
|                    | WO 98/24374           |   | Zhu, et al.   | 06-11-1998   |   |                |

## **OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS**

| Examiner Initials* | Cite No. <sup>1</sup> | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published. | T <sup>2</sup> |
|--------------------|-----------------------|---|----------------|
|                    |                       | ADAMS, H.P., Jr., et al., "Guidelines for the Management of Patients with Acute Ischemic Stroke: A Statement for Healthcare Professionals from a Special Writing of the Group of the Stroke Council," American Heart Association, Stroke, 25, 1994, 27 pages    |                |
|                    |                       | LI, Y., et al., "Multiphase Structure of a Segmented Polyurethane: Effects of Temperature and Annealing," Macromolecules, 25, 1992, pp. 7365-7372   |                |
|                    |                       | WHEATCRAFT, D., "On the Offensive Against Brain Attack," Science and Technology Review, June 1997; 10 pages   |                |

|                    |  |                 |  |  |
|--------------------|--|-----------------|--|--|
| Examiner Signature |  | Date Considered |  |  |
|--------------------|--|-----------------|--|--|

Examiner: initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Under the Paperwork Reduction Act of 1995, persons are required to respond to a collection of information unless it contains a valid OMB control number.

|   |                        |                          |                           |
|---|------------------------|--------------------------|---------------------------|
| Substitute for form 1449A/PTO   |                        | <b>Complete if Known</b> |                           |
| <b>INFORMATION DISCLOSURE<br/>STATEMENT BY APPLICANT</b><br>(use as many sheets as necessary) |                        | Application Number       |                           |
|   |                        | Filing Date              |                           |
|   |                        | First Named Inventor     | Jane P. Bearinger, et al. |
|   |                        | Group Art Unit           |                           |
|   |                        | Examiner Name            |                           |
| Sheet 4 of 5  | Attorney Docket Number | IL-11213                 |                           |

**OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS - CONTINUED**

| Examiner<br>Initials* | Cite<br>No. <sup>1</sup> | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published. | T<br>2 |
|-----------------------|--------------------------|---|--------|
|-----------------------|--------------------------|---|--------|

|                       |  |  |  |  |
|-----------------------|--|--|--|--|
|                       |  | LAMBDA, N.M.K., et al., "Polyurethanes in Biomedical Applications, CRC Press, New York, 1998, 30 pages   |  |  |
|                       |  | KIM, B.Y., et al., "Polyurethane Ionomers Having Shape Memory Effects," Polymer, 39(13), 1998, pp. 2803-2808   |  |  |
|                       |  | KIM, B.K., et al., "Polyurethanes Having Shape Memory Effects," Polymer, 37(26), 1996, pp. 5781-5793   |  |  |
|                       |  | HAYASHI, S., "Properties and Applications of Polyurethane-Series Shape Memory Polymer," Proceedings from the Annual Technical Conference (ANTEC) of the Society of Plastics Engineers, 1994, pp. 1998-1999                                     |  |  |
|                       |  | WANG, M., et al., "Recovery as a Measure of Oriented Crystalline Structure in Poly(ether ester)s Based on Poly(ethylene oxide) and Poly(ethylene terephthalate) Used as Shape Memory Polymers," J. Pol. Sci. Pol. Phys., 37, 1999, pp. 101-112 |  |  |
|                       |  | LI, F., et al., "Shape Memory Effect of Ethylene-Vinyl Acetate Copolymers," J. Appl. Pol. Sci., 71, 1999, pp. 1063-1070  |  |  |
|                       |  | IRIE, J., et al., "Shape Memory Polymers," chapter 9 of "Shape Memory Materials, Cambridge University Press, Cambridge, 1998, pp. 203-219  |  |  |
|                       |  | TAKAHASHI, T., et al., "Structure and Properties of Shape-Memory Polyurethane Block Copolymers," J. Appl. Pol. Sci., 60, 1996, p. 1061   |  |  |
|                       |  | LI, F., et al., "Studies on Thermally Stimulated Shape Memory Effect of Segmented Polyurethanes," J. Appl. Pol. Sci., 1997, pp. 1511-1516  |  |  |
|                       |  | LIN, J. R., et al., "Study on Shape-Memory Behavior of Polyether-Based Polyurethanes. I. Influence of Hard-Segment Content," J. Appl. Pol. Sci., 69, 1998, pp. 1563-1574   |  |  |
| Examiner<br>Signature |  | Date<br>Considered   |  |  |

|  |                          |   |   |                        |  |        |
|--|--------------------------|---|---|------------------------|--|--------|
| Substitute for form 1449A/PTO<br><b>INFORMATION DISCLOSURE<br/>STATEMENT BY APPLICANT</b><br>(use as many sheets as necessary) |                          |   |   | Complete if Known      |  |        |
|  |                          |   |   | Application Number     |  |        |
|  |                          |   |   | Filing Date            |  |        |
|  |                          |   |   | First Named Inventor   |  |        |
|  |                          |   |   | Group Art Unit         |  |        |
|  |                          |   |   | Examiner Name          |  |        |
| Sheet  | 5                        | of  | 5 | Attorney Docket Number |  |        |
| IL-11213   |                          |   |   |                        |  |        |
| OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS - CONTINUED  |                          |   |   |                        |  |        |
| Examiner<br>Initials*  | Cite<br>No. <sup>1</sup> | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published. |   |                        |  | T<br>2 |

|  |  |  |  |  |  |
|--|--|--|--|--|--|
|  |  | LIN, J. R., et al., "Study on Shape-Memory Behavior of Polyether-based Polyurethanes. II. Influence of Soft-Segment Molecular Weight., J. Appl. Pol. Sci., 69, 1998, pp. 1575-1586 |  |  |  |
|  |  | LOU, X., et al., "Thermally Stimulated Shape Memory Behavior of Ethylene Oxide-Ethylene Terephthalate Segmented Copolymer," J. Appl. Pol. Sci., 1997, pp. 2433-2440                |  |  |  |
|  |  | KINDLER, D.D., et al., "Update on Therapies for Acute Ischemic Stroke," Neurosurg. Focus 8(5), 2000, p. 1-5  |  |  |  |

|                       |  |                    |  |
|-----------------------|--|--------------------|--|
| Examiner<br>Signature |  | Date<br>Considered |  |
|-----------------------|--|--------------------|--|

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Unique citation designation number. <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.  
 SEND TO: Commissioner for Patents, Washington, DC 20231